PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Katsunori KAWANO et al. Group Art Unit: 2627

Application No.: 10/782,758 Examiner: A. GIESY

Filed: February 23, 2004 Docket No.: 118797

For: HOLOGRAM ERASING METHOD AND HOLOGRAM ERASING APPARATUS

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A Notice of Appeal is attached. Applicants respectfully request review of the Final Rejection mailed December 20, 2007 regarding the above-identified application in light of the following remarks. This review is requested for the following reasons: the Office Action (1) misinterprets the disclosure of the applied reference, and (2) misconstrues specifically recited claim features.

Claims 1-17, 19 and 20 are pending in this application. The Office Action, in paragraph 5, indicates that claims 10-17, 19 and 20 are allowed; and in paragraph 6, that claims 2 and 3 recite allowable subject matter. The Office Action, in paragraph 2, rejects claims 1, 4, 5, 8 and 9 under 35 U.S.C. §102(b) as being anticipated by "Holographic Memory with Localized Recording", Applied Optics, Vol. 40, No. 23, August 10, 2001 by Moser and Psaltis (hereinafter "Moser"); and, in paragraph 4, rejects claims 6 and 7 under 35 U.S.C. §103(a) as being unpatentable over Moser. These rejections are respectfully traversed.

MPEP §2131.01 states "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (emphasis added) *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ.2d 1051, 1053 (Fed. Cir. 1987). This standard is clearly not met here for at least the reasons discussed below.

Moser does not teach erasing the hologram by irradiating the detected recording region with a reference light beam and a random modulation signal light beam at the same time, as recited in claim 1. As noted throughout the Moser article, and specifically on page 3911, Moser is limited to a signal beam that only records by irradiating a holographic medium. It is the sensitizing beam in Moser, or the violet beam, that co-propagates with the reference beam to sensitize, or erase, the optical recording medium for recording by the signal light beam (page 3913, left column, first paragraph). In this regard, Moser states, "[t]his ensures that the violet light sensitizes efficiently the entire area to be recorded as shown in the inset of Fig. 3" (emphasis added) (page 3911, left column). Further, Moser teaches that each hologram is separately sensitized for 5 minutes and recorded for 3 minutes (page 3911, right column). As such, it is unreasonable to assert that Moser teaches erasing the hologram by irradiating the detected recording region with a reference light beam and a random modulation signal light beam at the same, as recited in claim 1.

The Office Action asserts that page 3913, left column, first paragraph, of Moser allegedly teaches features that are considered to correspond to erasing the hologram by irradiating the detected recording region with a reference light beam and a random modulation signal light beam at the same. The Office Action further asserts Fig. 3 supports the Office Action's interpretation allegedly because Fig. 3 shows the SLM in the path of the signal or non-shaded beam. The analysis of the Office Action fails for at least the following reasons.

Moser teaches that, when the reference spot size is reduced, the intensity of the green recording beam and sensitizing beam increases, enhancing the effect of fanning which causes erasure of neighboring holograms (page 3913, left column, first paragraph). The Office Action asserts that, based on this disclosure of Moser, Moser "denotes the use of the signal and reference beams (both green) as well as a violet sensitizing beam." As cited above, however, Moser merely teaches the intensity of the green recording beam and sensitizing beam increase. Moser does not indicate, as the Office Action suggests, that the green signal light beam is involved in selective erasure.

Additionally, the Office Action does not cite to any support in Moser, or provide any objective evidence, for its assertion that Moser denotes the use of the signal and reference beams (both green) as well as a violet sensitizing beam. Instead, the Office Action apparently relies on alleged knowledge in the art. However, such conclusion is (1) contrary to the explicit teaching of the above-cited portion of Moser that the intensity of the green recording beam and sensitizing beam increase, and (2) relying on what is allegedly well known in the art is not the standard for anticipation.

Moser further teaches that the reference light beam and the signal light beam originate from the green laser beam and that the signal light beam passes through the SLM (Fig. 3). The Office Action's suggestion that because the signal light beam in Moser contains random binary data from the SLM, that this signal light beam is involved in destruction or erasure of the recorded hologram is incorrect. Although the signal light beam in Moser contains random binary pattern data, there is no suggestion in Moser that the signal light beam is used for purposes other than recording and measuring the SNR.

Further, even under the Office Action's interpretation of the Moser, in the context of the disclosure of Moser as a whole, it is unreasonable to assert Moser teaches erasing the hologram by irradiating the detected recording region with the reference light beam and a

random modulation signal light beam at the same time, as recited in claim 1. Moser teaches randomizing the signal beam for the purpose of measuring SNR. In other words, the signal beam only records (page 3911, right column).

The subject matter of the pending claims are directed to, among other objects, a hologram erasing method for detecting on an optical recording medium where holograms are recorded, a recording region where the hologram is to be erased and erasing the hologram by irradiating that region with a reference light beam and a random modulation signal light beam at the same time. Conventional memory modules use a signal beam and a reference beam when recording and use a reference beam, and not the signal beam, when erasing. Moser, like conventional modules, as discussed above, merely discloses that the violet light and the reference light beam are irradiated when erasing, and that the signal light beam records and measures the SNR using random modulation.

With reference to Fig. 3, for example, when recording linear polarization is carried out between P polarization and S polarization such that when light passes through the first beam splitter, half the green light passes on to the reference beam and half is reflected to the signal beam. However, when polarization directions of the P beam and S beam are different, interference generally does not occur. The second beam splitter, in this regard, applies S polarization to the P polarized reference beam, and not the signal beam. As such, Moser neither teaches erasing the hologram by irradiating the detected recording region with the reference light beam and a random modulation signal light beam at the same time, as recited in claim 1, nor contemplates using a reference beam and signal light beam for erasing at the same time generally.

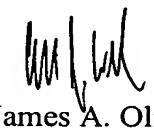
For at least the reasons set forth above, Moser does not anticipate the combination of features positively recited in claim 1.

In summary, Moser does not teach the combination of all of the features positively recited in independent claim 1. Additionally, claims 4-9 are also not taught, or reasonably suggested, by the applied reference for at least the respective dependence of these claims, directly or indirectly, on allowable base claims as well as for the separately patentable subject matter that each of these claims recites.

In view of the foregoing, Applicants respectfully request that the Review Panel review the substance of the December 20, 2007 Final Rejection in light of the above remarks. Applicants believe that upon such review, the Review Panel will determine that the applied reference does not anticipate, or render obvious, the subject matter of the pending claims. In this regard, favorable reconsideration and prompt allowance of claims 1 and 4-9, in addition to the previous allowance of claims 10-17, 19 and 20 and indicated-allowable subject matter in claims 2 and 3, are earnestly solicited.

Should the Review Panel believe that anything further would be desirable in order to place this application in an even better condition for allowance, the Review Panel is invited to contact the undersigned representative.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Christopher J. Wheeler
Registration No. 60,738

JAO:CJW/clf

Attachments:
Notice of Appeal

Date: March 18, 2008

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400